

STATE BUDGET AND CONTROL BOARD
MEETING OF June 17, 2003

REGULAR SESSION
ITEM NUMBER 2

AGENCY: Retirement Division

SUBJECT: System Valuations as of July 1, 2002, and Pro forma Analysis of Projected Impact of Guaranteeing Funding for COLA for SCRS and PORS

The annual valuations are conducted in accordance with the South Carolina Code of Laws, Section 9-1-260.

Each year a valuation is conducted on the four Retirement Systems administered by the Retirement Division. These valuations, in the opinion of the consulting actuary, correctly present the condition of the South Carolina Retirement Systems as to those benefits that are funded on an actuarial reserve basis.

BOARD ACTION REQUESTED:

Accept the valuations and receive as information the pro forma analysis by the plan actuary reflecting the actuarial impact of guaranteeing the funding for future cost of living increases for retirees.

ATTACHMENTS:

Agenda item worksheet; Valuation as of 7/1/02 of SCRS, PORS, GARS, and JSRS; Unfunded Accrued Liability History; System Comparison; Letter from J. Christian Conradi of Gabriel, Roeder, Smith and Co. Regarding the Actuarial Impact of Guaranteeing the COLA for SCRS and PORS; SCRS – Impact of guaranteeing the COLA as of July 1, 2002 with an assumed future inflation rate of 3.75% and 3.00%; PORS - Impact of guaranteeing the COLA as of July 1, 2002 with an assumed future inflation rate of 3.75% and 3.00%

BUDGET AND CONTROL BOARD AGENDA ITEM WORKSHEET

For meeting scheduled for:

REVISED

June 17, 2003

Blue Agenda

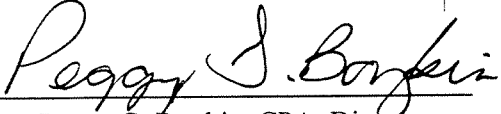
Regular Session

Executive Session

1. Submitted by:

(a) Agency: BC&B Retirement Division

(b) Authorized Official Signature


Peggy G. Boykin, CPA, Director

2. Subject: System Valuations as of July 1, 2002, and Pro forma analysis of projected impact of guarantying funding for COLA for SCRS and PORS

3. Summary Background Information:

The annual valuations are conducted in accordance with the South Carolina Code of Laws, Section 9-1-260.

Each year a valuation is conducted on the four Retirement Systems administered by the Retirement Division. These valuations, in the opinion of the consulting actuary, correctly present the condition of the South Carolina Retirement Systems as to those benefits that are funded on an actuarial reserve basis.

4. What is Board asked to do?

Accept the valuations and receive as information the pro forma analysis by the plan actuary reflecting the actuarial impact of guarantying the funding for future cost of living increases for retirees.

5. What is recommendation of the Board division involved?

Accept the valuations and receive as information the pro forma analysis by the plan actuary reflecting the actuarial impact of guarantying the funding for future cost of living increases for retirees.

6. Recommendation of other office (as required)?

	Authorized
Office Name _____	Signature _____

7. Supporting Documents:

List those attached:

List those not attached but available:

- SCRS Valuation
- PORS Valuation
- GARS Valuation
- JSRS Valuation
- Unfunded Accrued Liability History
- System Comparison
- Letter from J. Christian Conradi of Gabriel, Roeder, Smith and Co. Regarding the Actuarial Impact of Guaranteeing the COLA for SCRS and PORS
- SCRS – Impact of guaranteeing the COLA as of July 1, 2002 with an assumed future inflation rate of 3.75% and 3.00%
- PORS - Impact of guaranteeing the COLA as of July 1, 2002 with an assumed future inflation rate of 3.75% and 3.00%

SCRS

Year Ended	Assumed Interest Rate	Amort Period	Employee Contribution Rate	Normal Cost	Normal Cost Rate - Others	Funded Ratio	UAA Rate	UAA Rate Others	Pre-Retirement Death Benefit Rate	Post-Retirement Increase Special Fund	Actuarial Accrued Liability
1980	7%	12	4% to \$4800, 6% over \$4800	2.98%	2.49%		3.82%	3.46%	0.30%	0	
1981	7%	10	4% to \$4800, 6% over \$4800	3.08%	2.54%		3.42%	3.11%	0.30%	0.50%	
1982	7%	10	4% to \$4800, 6% over \$4800	3.35%	3%		3.15%	2.65%	0.30%	0.50%	
1983	7%	9	4% to \$4800, 6% over \$4800	3.41%	3.02%		3.09%	2.63%	0.30%	0.50%	
1984	7%	5	4% to \$4800, 6% over \$4800	3.74%	3.19%		2.76%	2.46%	0.30%	0.50%	
1985	7%	4	4% to \$4800, 6% over \$4800	3.74%	3.19%		2.76%	2.46%	0.30%	0.50%	
1986	7%	17	4% to \$4800, 6% over \$4800	3.74%	3.19%	73.10%	3.26%	2.96%	0.30%	0	
1987	7%	16	4% to \$4800, 6% over \$4800	3.74%	3.19%	74.50%	3.26%	2.96%	0.30%	0	
1988	7.50%	21	6%	3.74%	3.19%	73.40%	3.26%	2.96%	0.15%	0	
1989	8%	28	6%	3.75%	3.75%	70.20%	3.80%	2.95%	0.15%	0	
1990	8%	27	6%	3.81%	3.81%	71.70%	3.74%	2.89%	0.15%	0	
1991	8%	30	6%	3.93%	3.93%	71.80%	3.62%	2.77%	0.15%	0	
1992	8%	29	6%	3.93%	3.93%	73.30%	3.62%	2.77%	0.15%	0	
1993	8%	28	6%	3.93%	3.93%	74.40%	3.62%	2.77%	0.15%	0	
1994	8%	29	6%	3.93%	3.93%	75.20%	3.62%	2.77%	0.15%	0	
1995	7.25%	20	6%	5.00%	5.00%	88.20%	2.55%	1.70%	0.15%	12,980,497.	
1996	7.25%	19	6%	5.00%	5.00%	88.90%	2.55%	1.70%	0.15%	0	
1997	7.25%	14	6%	5.00%	5.00%	90.90%	2.55%	1.70%	0.15%	0	
1998	7.25%	10	6%	5.00%	5.00%	93.70%	2.55%	1.70%	0.15%	0	
1999	7.25%	2	6%	5.00%	5.00%	98.90%	2.55%	1.70%	0.15%	0	
2000	7.25%	16	6%	4.61%	4.61%	89.00%	2.94%	2.09%	0.15%	0	
2001	7.25%	18	6%	4.61%	4.61%	87.40%	2.94%	2.09%	0.15%	0	
2002	7.25%	21	6%	4.61%	4.61%	86.00%	2.94%	2.09%	0.15%	0	

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PORS

Year Ended	Assumed Interest Rate	Amort Period	Employee Contribution Rate	Normal Cost Rate	Funded Ratio	UAAAL Rate	Pre-Retirement Death Benefit Rate	Accidental Death Benefit Rate
1980	7%	6	5%	5.77%		4.53%	0.40%	0.20%
1981	— 7%	5	5%	5.77%		4.53%	0.40%	0.20%
1982	7%	4	5%	5.90%		4.40%	0.40%	0.20%
1983	7%	2	5%	5.97%		4.33%	0.40%	0.20%
1984	7%	5	5%	6.19%		4.11%	0.40%	0.20%
1985	7%	4	5%	6.19%		4.11%	0.40%	0.20%
1986	7%	2	5%	6.19%	88.90%	4.11%	0.40%	0.20%
1987	7%	2	5%	6.19%	93.20%	1.11%	0.20%	0.20%
1988	7.50%	6	6.50%	5.91%	87.90%	4.39%	0.20%	0.20%
1989	8%	7	6.50%	7.19%	81.20%	3.11%	0.20%	0.20%
1990	8%	10	6.50%	7.35%	82.40%	2.95%	0.20%	0.20%
1991	8%	12	6.50%	7.59%	83.20%	2.71%	0.20%	0.20%
1992	8%	10	6.50%	7.59%	85.40%	2.71%	0.20%	0.20%
1993	8%	9	6.50%	7.59%	86.70%	2.71%	0.20%	0.20%
1994	8%	11	6.50%	7.59%	85.40%	2.71%	0.20%	0.20%
1995	7.25%	8	6.50%	8.43%	95.20%	1.87%	0.20%	0.20%
1996	7.25%	7	6.50%	8.43%	95.80%	1.87%	0.20%	0.20%
1997	7.25%	6	6.50%	8.43%	96.30%	1.87%	0.20%	0.20%
1998	7.25%	5	6.50%	8.43%	97.20%	1.87%	0.20%	0.20%
1999	7.25%	5	6.50%	8.43%	97.20%	1.87%	0.20%	0.20%
2000	7.25%	7	6.50%	8.43%	95.80%	1.87%	0.20%	0.20%
2001	7.25%	10	6.50%	8.43%	94.60%	1.87%	0.20%	0.20%
2002	7.25%	15	6.50%	8.43%	93.00%	1.87%	0.20%	0.20%

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South Carolina Retirement Systems - Summary of Results

	SCRS July 1,		PORS July 1,		GARS July 1,		JSRS July 1,	
	2002	2001	2002	2001	2002	2001	2002	2001
<u>Number of Active Members and Compensation</u>								
State Employees Compensation	58,908	61,787						
	\$ 2,060,141	\$ 2,097,420						
Teachers Compensation	83,694	83,817						
	\$ 2,772,237	\$ 2,675,546						
Others Compensation	46,564	45,890						
	\$ 1,315,334	\$ 1,244,571						
Total Number of Active Members	189,166	191,494	23,963	24,821	200	209	128	128
Total Compensation	\$ 6,147,712	\$ 6,017,537	\$ 757,393	\$ 757,335	\$ 4,515	\$ 4,761	\$ 14,211	\$ 14,109
<u>Number of Persons Receiving Benefits and Benefits</u>								
Total Number Receiving	79,064	74,054	7,706	6,970	266	251	126	118
Total Amount of Benefits	\$ 1,201,180	\$ 1,085,634	\$ 117,134	\$ 102,395	\$ 4,674	\$ 4,381	\$ 8,052	\$ 7,594
<u>Trust Fund Assets</u>								
Market Value								
Actuarial Value	\$ 18,439,431	\$ 18,585,912	\$ 2,236,350	\$ 2,197,795	\$ 41,531	\$ 42,953	\$ 96,099	\$ 95,718
	\$ 19,298,174	\$ 18,486,773	\$ 2,351,100	\$ 2,197,982	\$ 43,841	\$ 42,788	\$ 100,074	\$ 94,795
Unfunded Actuarial Accrued Liability (UAAL)	\$ 3,148,400	\$ 2,675,374	\$ 176,776	\$ 126,275	\$ 29,205	\$ 25,503	\$ 66,366	\$ 64,451
<u>Remaining Liquidation Period (Years)</u>	21	18	15	10	25	23	30	30
<u>Required Contribution as a Percent of Compensation*</u>								
State and Teachers								
Normal Cost Contribution	4.61%	4.61%	8.43%	8.43%	\$ 668	\$ 704	21.16%	21.16%
UAAL Contribution	2.94%	2.94%	1.87%	1.87%	\$ 2,211	\$ 2,016	20.19%	19.75%
Group Life Contribution	0.15%	0.15%	0.20%	0.20%	\$ 11	\$ 12	0.75%	0.75%
Accidental Death Contribution	NA	NA	0.20%	0.20%	NA	NA	NA	NA
Total	7.70%	7.70%	10.70%	10.70%	\$ 2,890	\$ 2,732	42.10%	41.66%
Others								
Normal Cost Contribution	4.61%	4.61%						
UAAL Contribution	2.09%	2.09%						
Group Life Contribution	0.15%	0.15%						
Total	6.85%	6.85%						

Number of Active Members and Compensation

State Employees

Compensation

Teachers

Compensation

Others

Compensation

Total Number of Active Members

Total Compensation

Number of Persons Receiving Benefits and Benefits

Total Number Receiving

Total Amount of Benefits

Trust Fund Assets

Market Value

Actuarial Value

Unfunded Actuarial Accrued Liability (UAAL)

Remaining Liquidation Period (Years)

Required Contribution as a Percent of Compensation*

State and Teachers

Normal Cost Contribution

UAAL Contribution

Group Life Contribution

Accidental Death Contribution

Total

Others

Normal Cost Contribution

UAAL Contribution

Group Life Contribution

Total

* For GARS, dollar amounts
all dollar amounts in thousands



GABRIEL, ROEDER, SMITH & COMPANY
Consultants & Actuaries

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June 10, 2003

Ms. Peggy G. Boykin, CPA
Director
South Carolina Retirement Systems
P.O. Box 11960
Columbia, SC 29211-1960

Dear Peggy:

Subject: Actuarial Impact of Guaranteeing the COLA for SCRS and PORS

Enclosed are four exhibits that compare some key actuarial statistics under three variations on the July 1, 2002 actuarial valuation for the South Carolina Retirement System and the South Carolina Police Officers Retirement System:

- Results shown in the actuarial valuation report dated May 15, 2003 as presented to the State Budget and Control Board last month are shown in column 2. These results do not reflect any future post-retirement cost-of-living adjustments (COLAs).
- Results adjusted for the 2.4% COLA scheduled to be effective July 1, 2003 are shown in column 3.
- Results reflecting a fully guaranteed COLA are shown in column 4. Exhibits 1 and 2 show the results for SCRS and PORS respectively if a fully guaranteed automatic COLA with average COLAs equal to the current valuation assumption of a 3.75% annual increase in the cost of living.
- Exhibits 3 and 4 show the results for SCRS and PORS respectively of a fully guaranteed COLA with average COLAs equal to 3.00%. 3% represents the average cost of living increase over the last 20 years.

It should be noted that no other assumptions were modified in determining the 3.0% COLA results. This results in somewhat of an inconsistency between the COLA assumption and the inflation assumption. If a 3.0% COLA assumption were to be adopted then we would recommend revisiting all of the economic assumptions.

As you can see, if the future COLAs were guaranteed without increasing the employer or member contribution rates, the amortization period would increase to "infinity." I.e., the current contribution rates would not be adequate to ever fund the unfunded actuarial accrued liability (UAAL), and therefore the UAAL would increase over time. This becomes apparent

Ms. Peggy G. Boykin, CPA
June 10, 2003
Page 2

if you note that the employer normal cost with the guaranteed COLA (line 2.b. in column 4) is larger than the current employer contribution rates. Therefore, all of the rates go towards covering the normal cost, and nothing remains to amortize the UAAL. In fact, since the normal cost is larger than the employer contribution rates, the UAAL will increase due to this shortfall, in addition to increases that result from the addition of interest due to the passage of time.

If the State of South Carolina wished to guarantee the COLA while simultaneously increasing the employer contribution rates sufficiently to pay the employer normal cost plus a 30-year amortization payment on the UAAL, the employer contribution rates would have to increase.

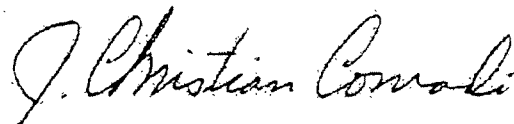
Please keep in mind that these calculations are based on the July 1, 2002 actuarial valuation, and no account has been taken of the deferred asset loss from FY 2002 that will be recognized over the next few years. As you know, only 20% of the actuarial investment loss for FY 2002 is currently recognized in the actuarial value of assets. Therefore, if the COLA were guaranteed and the employer contribution rates were increased to the new 30 year amortization rates, additional increases would be required for the next few years as more of this loss is recognized, unless the plan experiences offsetting actuarial gains.

In making our calculations, we assumed that the State would want to discontinue the practice of setting the employer contribution rate for other employers (local government) at 0.85% less than the rate for state employees and teachers. These calculations were completed assuming the state would begin contributing one rate for all employees.

All of our calculations reflect member and financial data and benefit provisions used in preparing the July 1, 2002 actuarial valuation. The calculations are based on current actuarial assumptions and methodology. In particular, the current assumption set includes an assumption of future inflation of 3.75%, so future COLAs were projected at this rate (except as noted for Exhibits 3 and 4 where future COLAs were projected at 3.0%). The amortization periods and payments are computed as a level percent of covered payroll, assuming payroll increases 4.00% per year.

If you have any questions about our analysis, please let us know.

Sincerely,
Gabriel, Roeder, Smith & Company



J. Christian Conradi
Senior Consultant

nib

Enclosure

c: Ms. Tammy Davis

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Exhibit 1
South Carolina Retirement System (SCRS)
Actuarial Impact of Guaranteeing the COLA
As of July 1, 2002
Assumed Future Inflation Rate: 3.75%

Item (1)	Results from July 1, 2002 Actuarial Valuation - No Recognition of Any Future COLAs (2)	Results from July 1, 2002 Actuarial Valuation, Adjusted for 2.4% COLA Effective July 1, 2003 (3)	Results from July 1, 2002 Actuarial Valuation as Though All Future COLAs Are Fully Guaranteed (4)
1. Unfunded actuarial accrued liability (UAAL, millions)	\$ 3,148.4	\$ 3,426.8	\$ 11,703.2
2. Normal cost rate (% of covered payroll)			
2.a. Member rate	6.00%	6.00%	6.00%
2.b. Employer normal cost rate	4.61%	4.61%	8.40%
3. Funded ratio (actuarial value of assets / actuarial accrued liability)	86.0%	84.9%	62.2%
4. Current employer contribution rates			
4.a. State employees and teachers	7.55%	7.55%	7.55%
4.b. Other employees	6.70%	6.70%	6.70%
5. Amortization (funding) period based on current employer contribution rates, in years	21	24	Never (Infinity)
6. Amortization rates required to achieve 30-year funding with guaranteed COLA			
6.a. State employees and teachers	NA	NA	9.02%
6.b. Other employees	NA	NA	9.02%
7. Total employer rates required to achieve 30-year funding with guaranteed COLA			
7.a. State employees and teachers (Item 2.b. + Item 6.a.)	NA	NA	17.42%
7.b. Other employees (Item 2.b. + Item 6.b.)	NA	NA	17.42%
8. Required contribution rate increase (% of covered payroll)			
8.a. State employees and teachers	NA	NA	9.87%
8.b. Other employees	NA	NA	10.72%

Notes: All calculations are based on member and financial data used to prepare the June 30 2002 actuarial valuation
All calculations are based on current actuarial assumptions and methods, including 3.75% inflation rate.
Therefore, future COLAs are anticipated to average 3.75% in this analysis.
Current spread of 0.85% between the employer rate for state & teachers and the employer rate for other members was eliminated.
All contribution rates shown exclude the Group Insurance contribution.

Exhibit 2
South Carolina Retirement System (SCRS)
Actuarial Impact of Guaranteeing the COLA
As of July 1, 2002
Assumed Future Inflation Rate: 3.00%

Item (1)	Results from July 1, 2002 Actuarial Valuation - No Recognition of Any Future COLAs (2)	Results from July 1, 2002 Actuarial Valuation, Adjusted for 2.4% COLA Effective July 1, 2003 (3)	Results from July 1, 2002 Actuarial Valuation as Though All Future COLAs Are Fully Guaranteed (4)
1. Unfunded actuarial accrued liability (UAAL, millions)	\$ 3,148.4	\$ 3,426.8	\$ 9,571.0
2. Normal cost rate (% of covered payroll)			
2.a. Member rate	6.00%	6.00%	6.00%
2.b. Employer normal cost rate	4.61%	4.61%	7.46%
3. Funded ratio (actuarial value of assets / actuarial accrued liability)	86.0%	84.9%	66.8%
4. Current employer contribution rates			
4.a. State employees and teachers	7.55%	7.55%	7.55%
4.b. Other employees	6.70%	6.70%	6.70%
5. Amortization (funding) period based on current employer contribution rates, in years	21	24	Never (Infinity)
6. Amortization rates required to achieve 30-year funding with guaranteed COLA			
6.a. State employees and teachers	NA	NA	7.28%
6.b. Other employees	NA	NA	7.28%
7. Total employer rates required to achieve 30-year funding with guaranteed COLA			
7.a. State employees and teachers (Item 2.b. + Item 6.a.)	NA	NA	14.74%
7.b. Other employees (Item 2.b. + Item 6.b.)	NA	NA	14.74%
8. Required contribution rate increase (% of covered payroll)			
8.a. State employees and teachers	NA	NA	7.19%
8.b. Other employees	NA	NA	8.04%

Notes: All calculations are based on member and financial data used to prepare the June 30 2002 actuarial valuation
All calculations are based on current actuarial assumptions and methods, except that future COLAs are assumed to average 3.00%.
Current spread of 0.85% between the employer rate for state & teachers and the employer rate for other members was eliminated.
All contribution rates shown exclude the Group Insurance contribution.

Exhibit 3
South Carolina Police Officers Retirement System (PORS)

Actuarial Impact of Guaranteeing the COLA
As of July 1, 2002
Assumed Future Inflation Rate: 3.75%

Item (1)	Results from July 1, 2002 Actuarial Valuation - No Recognition of Any Future COLAs (2)	Results from July 1, 2002 Actuarial Valuation, Adjusted for 2.4% COLA Effective July 1, 2003 (3)	Results from July 1, 2002 Actuarial Valuation as Though All Future COLAs Are Fully Guaranteed (4)
1. Unfunded actuarial accrued liability (UAAL, millions)	\$ 176.8	\$ 204.1	\$ 1,020.6
2. Normal cost rate (% of covered payroll)			
2.a. Member rate	6.50%	6.50%	6.50%
2.b. Employer normal cost rate	8.43%	8.43%	13.85%
3. Funded ratio (actuarial value of assets / actuarial accrued liability)	93.0%	92.0%	69.7%
4. Current employer contribution rate	10.30%	10.30%	10.30%
5. Amortization (funding) period based on current employer contribution rate, in years	15	17	Infinity (Never)
6. Amortization rate required to achieve 30-year funding with guaranteed COLA	NA	NA	5.83%
7. Total employer rate required to achieve 30-year funding with guaranteed COLA	NA	NA	19.68%
8. Required contribution rate increase (% of covered payroll)	NA	NA	9.38%

Notes: All calculations are based on member and financial data used to prepare the June 30 2002 actuarial valuation
All calculations are based on current actuarial assumptions and methods, including 3.75% inflation rate.
Therefore, future COLAs are anticipated to average 3.75% in this analysis.
All contribution rates shown exclude the Group Insurance and Accidental Death Benefit contributions.

Exhibit 4
South Carolina Police Officers Retirement System (PORS)

Actuarial Impact of Guaranteeing the COLA

As of July 1, 2002

Assumed Future Inflation Rate: 3.00%

Item	Results from July 1, 2002 Actuarial Valuation - No Recognition of Any Future COLAs	Results from July 1, 2002 Actuarial Valuation, Adjusted for 2.4% COLA Effective July 1, 2003	Results from July 1, 2002 Actuarial Valuation as Though All Future COLAs Are Fully Guaranteed
(1)	(2)	(3)	(4)
1. Unfunded actuarial accrued liability (UAAL, millions)	\$ 176.8	\$ 204.1	\$ 819.9
2. Normal cost rate (% of covered payroll)			
2.a. Member rate	6.50%	6.50%	6.50%
2.b. Employer normal cost rate	8.43%	8.43%	12.38%
3. Funded ratio (actuarial value of assets / actuarial accrued liability)	93.0%	92.0%	74.1%
4. Current employer contribution rate	10.30%	10.30%	10.30%
5. Amortization (funding) period based on current employer contribution rate, in years	15	17	Infinity (Never)
6. Amortization rate required to achieve 30-year funding with guaranteed COLA	NA	NA	4.68%
7. Total employer rate required to achieve 30-year funding with guaranteed COLA	NA	NA	17.06%
8. Required contribution rate increase (% of covered payroll)	NA	NA	6.76%

Notes: All calculations are based on member and financial data used to prepare the June 30 2002 actuarial valuation

All calculations are based on current actuarial assumptions and methods, except that future COLAs are assumed to average 3.00%.

All contribution rates shown exclude the Group Insurance and Accidental Death Benefit contributions.